

FIG. 1

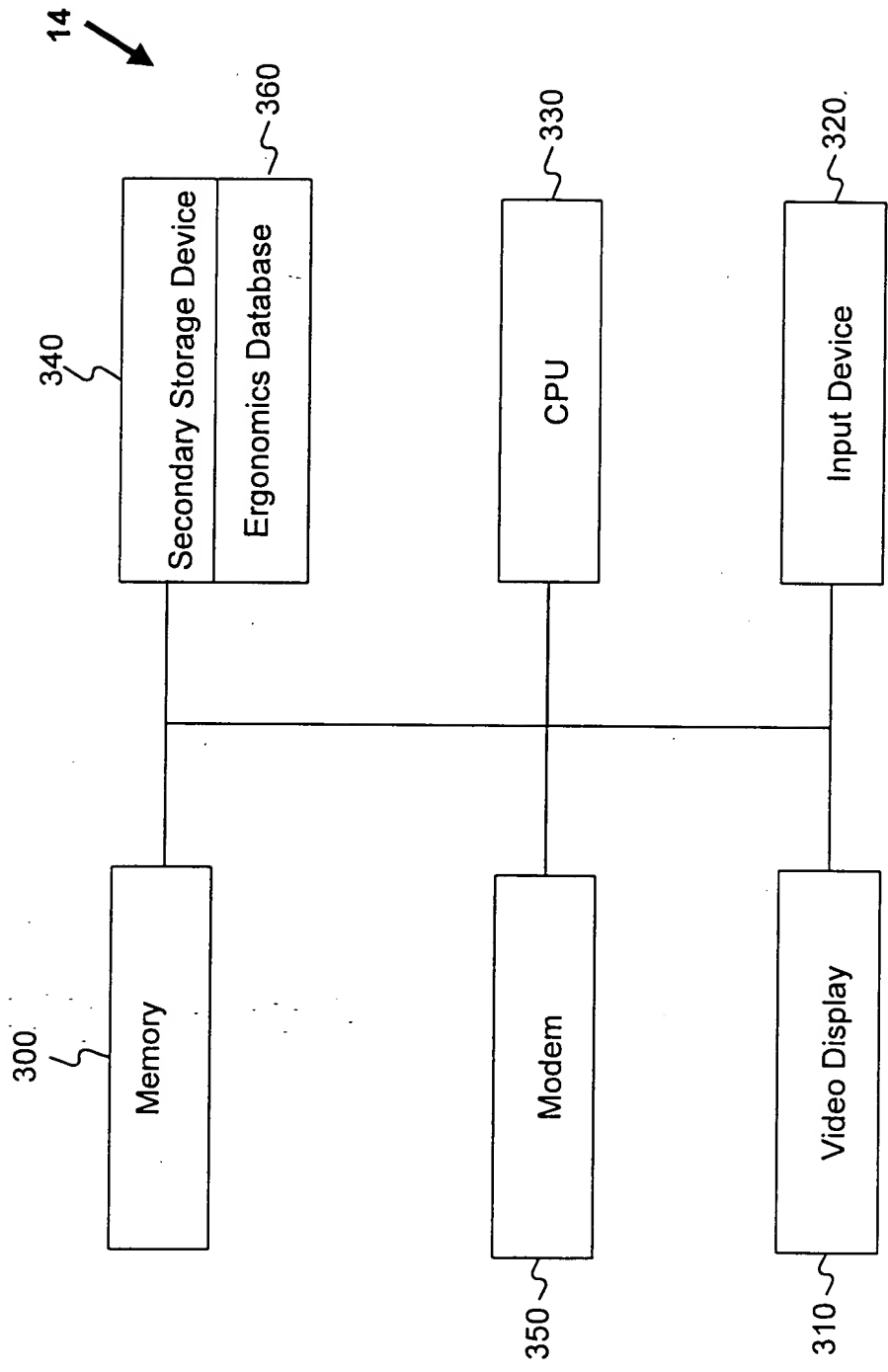


FIG. 4

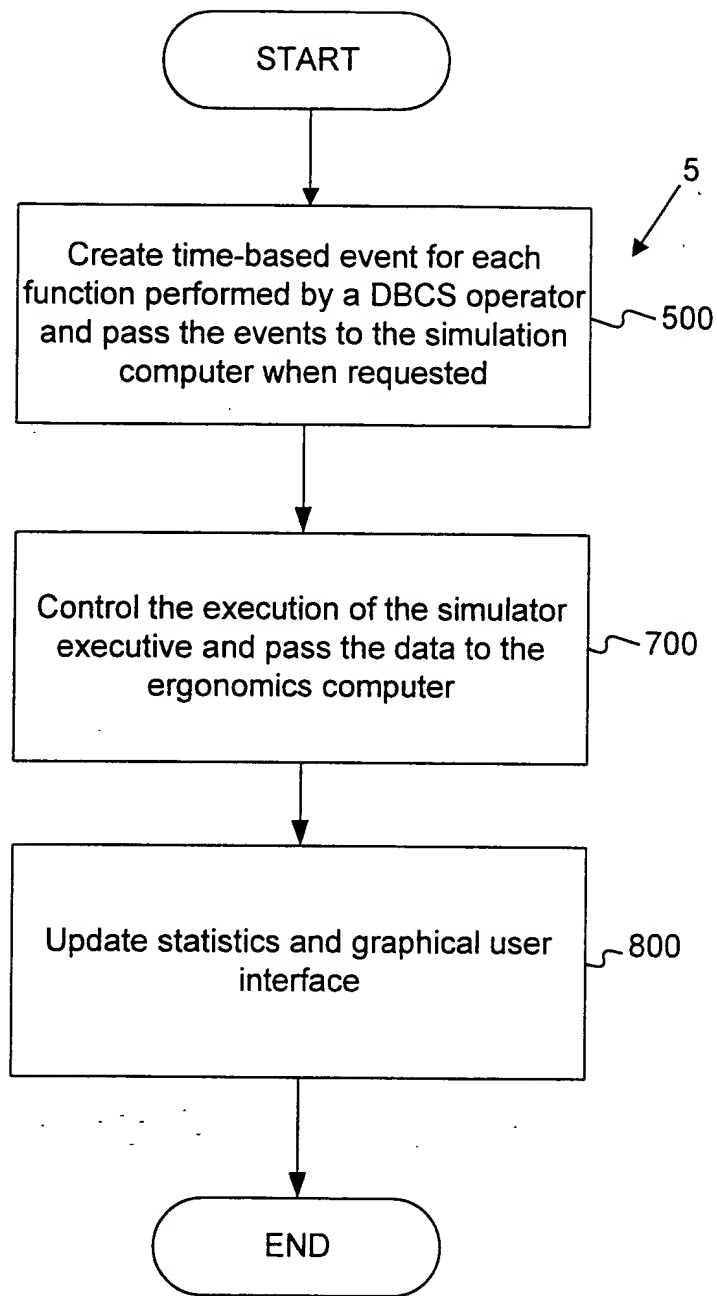


Fig. 5

EAI Jack Task Anthology

Five-Hour Shift Report - Metabolic Energy Expenditure

USPS DBCS SWEEPER

Job #3287

Parameters

Level 2 Tray Lift

Female, 5'0", 125 lbs

Duration = 302.89 min

Work time <= 8 hr

Units = inches, kilograms

Arm Work = 30%

Body Work = 70%

Standing = 93%, Bent = 7%

Task Descriptions

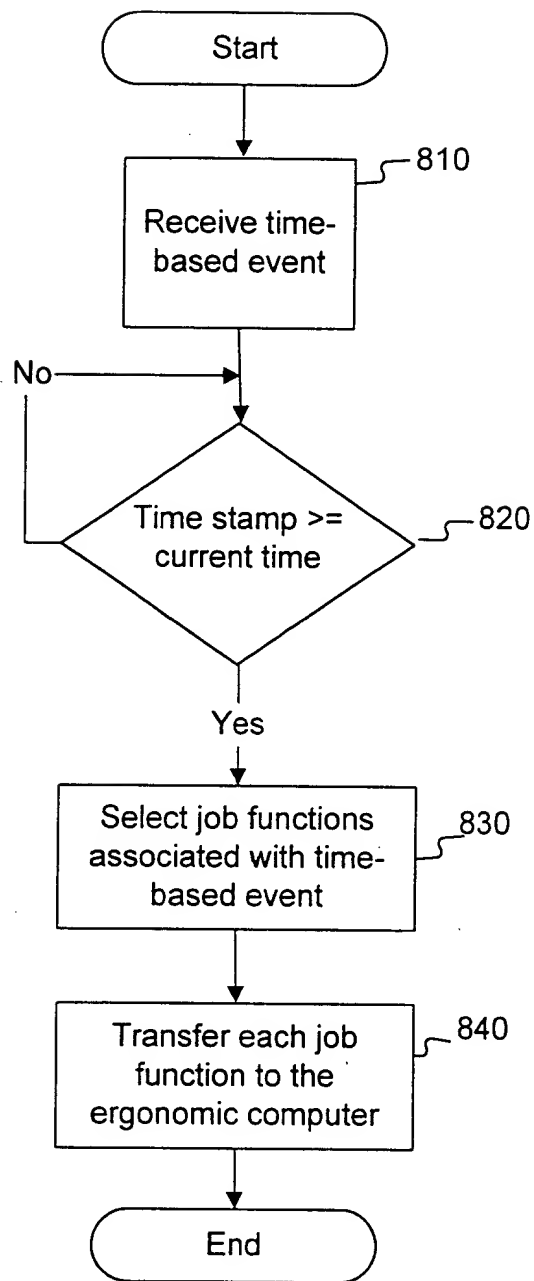
Task#	keal	Description	Frequency	Category	Detail	High Pos (m)	Low Pos (m)	Load (kg)	Time (min)	Force (kg)	Walk-speed(m/s)	Distance (m)	Slope(%)
10	2.217	walk	158	walks	inclined	-	-	-	0.00425	-	-	13.78	0
20	6.173	raise arms	160	lifts	stoop	28.65	62.5	0	-	-	-	-	-
30	5.296	reach to drawer	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
40	5.296	grasp drawer	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
50	5.296	pull drawer out	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
60	5.296	release drawer	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
70	10.000	reach to DBCS	160	arm work - lateral	180 deg. both hands	-	-	0	-	-	-	-	-
80	5.296	grasp letters	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
90	7.314	lift letters	160	arm work - lateral	90 deg. standing	-	-	2	-	-	-	-	-
100	4.800	move letters to 1226 F rack	160	arm work - general	light - both arms	-	-	-	0.25	-	-	-	-
110	5.296	place letters in letter tray	160	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
120	5.317	stand straight	160	lowers	stoop	28.65	50.0	0	-	-	-	-	-
130	0.358	raise arms	17	lifts	stoop	27.72	33.29	0	-	-	-	-	-
140	0.563	grasp tray	17	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
150	0.000	pull tray out	17	pushes/pulls	bench height (31.5 in)	-	-	-	-	22	-	16.87	-
160	3.420	lift tray	17	lifts	semi-squat	29.38	51.51	11.34	-	-	-	-	-
170	2.465	place tray	17	arm work - lateral	180 deg. both hands	-	-	11.34	-	-	-	-	-
180	0.000	push tray in	17	pushes/pulls	chin height (59 in)	-	-	-	-	22	-	14.49	-
190	0.000	release tray	17	arm work - lateral	180 deg. standing	-	-	0	-	-	-	-	-
200	0.795	stand straight	17	lowers	stoop	27.85	59.29	0	-	-	-	-	-
210	0.147	raise arms	7	lifts	stoop	27.72	33.29	0	-	-	-	-	-
220	0.232	grasp tray	7	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
230	0.000	pull tray out	7	pushes/pulls	bench height (31.5 in)	-	-	-	-	22	-	16.87	-
240	1.408	lift tray	7	lifts	semi-squat	29.38	51.51	11.34	-	-	-	-	-
250	1.015	place tray	7	arm work - lateral	180 deg. both hands	-	-	11.34	-	-	-	-	-
260	0.000	push tray in	7	pushes/pulls	chin height (59 in)	-	-	-	-	22	-	14.49	-
270	0.000	release tray	7	arm work - lateral	180 deg. standing	-	-	0	-	-	-	-	-
280	0.327	stand straight	7	lowers	stoop	27.85	59.29	0	-	-	-	-	-
290	6.828	raise arms	177	lifts	stoop	28.65	62.5	0	-	-	-	-	-
300	5.859	reach to drawer	177	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
310	5.859	grasp drawer	177	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
320	5.859	pull drawer out	177	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-
330	5.859	release drawer	177	arm work - lateral	90 deg. standing	-	-	0	-	-	-	-	-

FIG. 6

```
graph TD; Start([Start]) --> 710[User creates a listing of tasks to be performed by a human operator working at a DBCS]; 710 --> 720[Convert the listing of tasks into packetized job functions]; 720 --> 730[Store packetized job functions in job function libraries]; 730 --> END([END]);
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Flowchart 700 illustrates the process of creating a task listing for a DBCS operator. The process begins with a "Start" terminal, followed by a process block 710: "User creates a listing of tasks to be performed by a human operator working at a DBCS". This is followed by process block 720: "Convert the listing of tasks into packetized job functions", and then process block 730: "Store packetized job functions in job function libraries". The process concludes with an "END" terminal.

500



700

Fig. 8

800

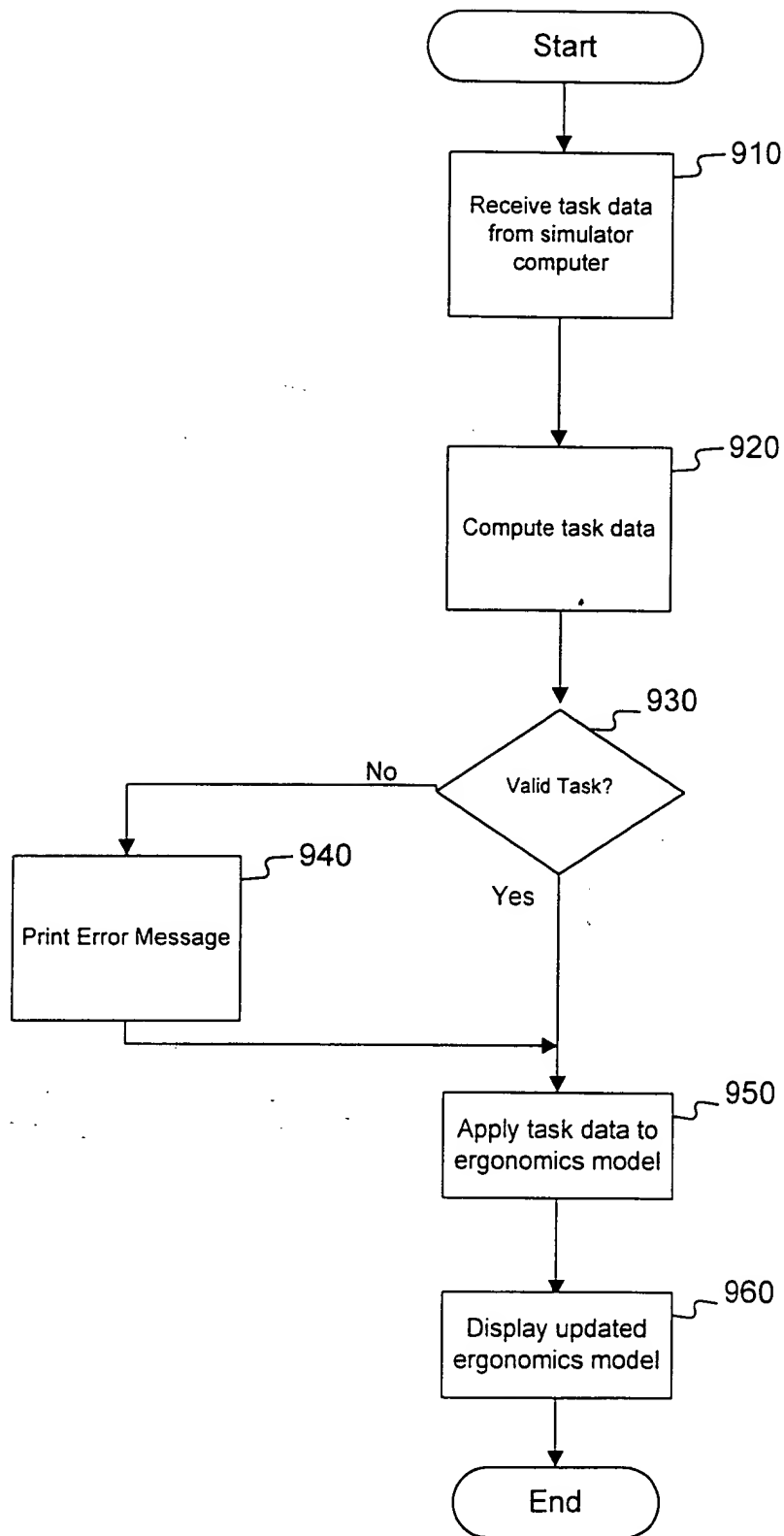


Fig. 9